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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/945,204	08/31/2001	David J. Domingues	PIL0060/US	4507
33072	7590	08/11/2005	EXAMINER	
KAGAN BINDER, PLLC SUITE 200, MAPLE ISLAND BUILDING 221 MAIN STREET NORTH STILLWATER, MN 55082			TRAN LIEN, THUY	
			ART UNIT	PAPER NUMBER
			1761	

DATE MAILED: 08/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/945,204

Applicant(s)

DOMINGUES, DAVID J.

Examiner

Lien T. Tran

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-44, 46-48, 50, 51, 53 and 55-57 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-44, 46-48, 50-51, 53, 55-57 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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Claims 1-44, 46-48, 50-51, 53, 55-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kuechle et al in view of Gulstad et al.

Kuechle et al disclose a dough comprising a leavening system. A portion of the leavening system is encapsulated to delay the chemical reaction between the acidic and basic ingredients to allow for shelf life at temperature of about 30-50 degree F of up to about seven day. Preferably the basic ingredient is encapsulated such as encapsulated sodium bicarbonate. The carbonate is encapsulated in hydrogenated vegetable oil; one type of encapsulated soda used is sodium bicarbonated coated with hydrogenated cottonseed oil. The acidic ingredients used are the ones listed on col. 8 lines 19-27. The amount of basic ingredient is .5-2.5 and the amount of acidic ingredient is .5-2.5. The dough is stored in freezing condition and refrigerated condition. The dough is packaged in a container and the container is not pressurized. (see col. 8 lines 8-54, col. 9 lines 1-15, col. 11 lines 1-9)

The basic ingredient is encapsulated in a fat; the fat is the barrier material in the Kuechle et al dough. The fact that the basic ingredient is encapsulated; the reaction between the acidic ingredient and basic ingredient will be inhibit because Kuechle et al disclose the reaction is delayed.

While Kuechle et al disclose some of the same acidic ingredient as claimed, they do not specifically disclose selecting the acidic ingredient to have relatively low solubility and encapsulating using a fluidized bed. Kuechle et al also do not disclose the raw specific volume, the solubility as claimed, the melting temperature of the barrier material, the type of barrier material as claimed, the amount of basic ingredient of the

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encapsulated particles, encapsulating the acidic ingredient, the solid fat index, the period of refrigerating storage as claimed and the baking temperature.

Gulstad et al disclose doughs comprising encapsulated basic and acidic ingredients. They teach leavening during cooking can be accomplished by using leavening agents which are only nominally active at room temperature or by protecting the agents. Acidic ingredients which are only nominally active at room temperature are sodium aluminum sulfate, dicalcium phosphate dihydrate and sodium aluminum phosphate. They also teach encapsulating the ingredients in high melting fat having melting point in the range of 110-120 degree F. (see column 3 lines 54 through col. 4 line 41)

Since the leavening basic ingredient in Kuechle et al is encapsulated, it is obvious the reaction between the basic ingredient and the leavening does not occur till the dough is subjected to baking otherwise the purpose of using encapsulated leavening agent will be defeated. It would have been obvious to one skilled in the art to determine the optimum degree of expansion and carbon dioxide evolution during storage through finding the optimum parameters for encapsulating the leavening agent. Thus, it would have been obvious to choose acidic ingredient among the materials disclosed to be nominally active at below baking temperature as taught by Gulstad et al to ensure the delaying of the chemical reaction between the leavening agents. This is contemplated by Kuechle et al because they disclose in one embodiment, the leavening acid includes sodium aluminum phosphate. It would also have been obvious to one skilled in the art to use a high melting fat as the encapsulating material as taught

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by Gulstad to ensure that the barrier material will not melt at processing temperature which will defeat the purpose of encapsulation. It would also have been obvious to use fat with high solid fat index to obtain a more protecting coating because such fat has high solid content. This would have been readily apparent to one skilled in the art. Finding the optimum variable to obtain product with the most optimum properties is within the skill of one in the art. The limitation on the refrigerating storage of at least 12 weeks does not define over Kuechle et al. The shelf stability up to 7 days disclosed in Kuechle et al refers to the dough after it is thawed and then stored at refrigeration temperature; it does not refer to the dough that is not thawed. It would have been obvious to one skilled in the art to store the dough in the refrigerator after preparation when extended storage provided by freezing is not needed. Since the leavening system in the Kuechle et al dough is encapsulated just as claimed, it is obvious the dough exhibits the same stability as claimed. Kuechle et al. disclose to delay the reaction between the basic and acidic ingredients during storage. When sodium aluminum phosphate is used, it is obvious it will have the same solubility as claimed. It would have been obvious to use any known method in the art to encapsulate the leavening system and fluidized bed is a well known method in the art to use in encapsulating technique. . As to the specific volume, this varies with the type of dough and can readily be determined by one skilled in the art to obtain the most optimum product. The baking temperature also varies with the types of dough product and the degree of cooking desired. It is within the skill of one in the art to determine such parameter. It would also have been within the skill of one in the art to determine the appropriate amount of basic

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ingredient to use in the encapsulation and to determine the appropriate size to ensure proper dispersion in the dough.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lien T Tran whose telephone number is 571-272-1408. The examiner can normally be reached on Tuesday and Thursday-Friday.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

August 7, 2005

Lien Tran
LIEN TRAN
PRIMARY EXAMINER
Group 1700